

**MONITORING METHOD FOR SEMICONDUCTOR LASER OUTPUT BEAM**

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**Abstract**

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**PURPOSE:**To enable to perform an accurate and stable monitoring on the laser beam by a method wherein a diffraction grating is provided in front of a semiconductor laser beam and a direct monitoring is performed on the laser beam.

**CONSTITUTION:**The diffraction grading 34 such as a grating lens and the like is arranged on the output beam path (the path of output laser beam to be used directly) located in front of a semiconductor laser 31. The diffracted beam 36 coming from said diffraction grating 34 is picked out to outside for use. On the other hand, among the output beams 35 of the semiconductor layer, the laser beam 37 to be used directly is monitored by providing a light-receiving element 35 so that the zero diffraction beam, which has not received the effect of diffraction of the diffraction grating 34, or a higher diffraction beam can be received. Thus, the intensity of the laser beam used directly is monitored as above, and the monitoring can be performed accurately and stably.

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